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| 10/724,214 | 12/01/2003 | Bart Fischer | 117913 | 9838 |
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| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | EXAMINER ANTHONY, JOSEPH DAVID | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1714 | |
| DATE MAILED: 06/29/2006 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/724,214

Applicant(s)

FISCHER ET AL.

Examiner

Joseph D. Anthony

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/01/2003 as preliminary amendment.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-7, drawn to cyclic ketone peroxide formulations, classified in class 252, subclass 186.26.
 - II. Claims 8-9, drawn to a process of using a cyclic ketone peroxide formulation, classified in class 526, subclass 227, and class 525 subclass 256.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the product as claimed can be used in a process of bleaching wood pulp.
3. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.
4. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Jeff Bousquet (Reg. # 57,771) on 06/14/06 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-7. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-9 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Priority

7. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in EPO on 12/06/2002. It is noted, however, that applicant has not filed a certified copy of the EPO 02080128.8 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

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granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Torenbeek et al. WO 96/03397 or Schuurman et al. WO 98/33770 or Meijer et al. U.S. Patent Number 5,932,660 or Stigter et al. U.S. Patent Number 5,907,022.

Torenbeek et al teach a transportable, storage stable cyclic ketone peroxide composition which comprises 1.0-90% by weight of one or more cyclic ketone peroxides and 10-99% by weight of one or more diluents selected from the group consisting of liquid phlegmatizers for the cyclic ketone peroxides, plasticizers, solid polymeric carriers, inorganic supports, organic peroxides and mixtures thereof, is disclosed. Also disclosed is the use of these cyclic ketone peroxide formulations in the modification of (co)polymers. These formulations provide a surprising degree of polymer modification when compared to their non-cyclic ketone peroxide counterparts, see abstract. Many of the specifically disclosed phlegmatizers read directly on applicant's disclosed species of co-crystallizing compounds, such as triethyl phosphate, tricresyl phosphate, trixylyl phosphate, cresyl diphenyl phosphate etc, see page 7, line 15 to page 10, lines 15. Applicant's claims are deemed to be directly anticipated over the examples wherein various cyclic ketone peroxide compounds are stabilized with the various phlegmatizer/diluent which are deemed to read on applicant's claimed co-crystallizing compounds.

Schuurman et al. cyclic ketone peroxide formulation with improved safety characteristics because they are combined with two phlegmatizers having boiling points that are more than 20 degrees C, apart, see abstract. Many of the specifically disclosed phlegmatizers read directly on applicant's disclosed species of co-crystallizing compounds, such as triethyl phosphate, tricresyl phosphate, trixylyl phosphate, cresyl diphenyl phosphate etc, see page 11, lines 4-7. Also see page 5, line 10 to page 13, line 23. Applicant's claims are deemed to be directly anticipated over the examples

wherein various cyclic ketone peroxide compounds are stabilized with the various phlegmatizer/diluent which are deemed to read on applicant's claimed co-crystallizing compounds.

Meijer et al. teach a process for the modification of (co) polymers employing an organic peroxide comprising the step of contacting a (co) polymer with organic peroxide under conditions whereby at least some of the said organic peroxide is decomposed, is disclosed. The process is characterized in that at least 20% of the total active oxygen content of said organic peroxide is attributable to one or more cyclic ketone peroxides. In a second aspect, the invention relates to the use of an organic peroxide composition wherein at least 20% of the total active oxygen content is contributed by one or more cyclic ketone peroxide(s) modify (co) polymers. It has been found that these cyclic ketone peroxides are extremely efficient in (co) polymer modification processes, see abstract. Applicant's claims are deemed to be anticipated over those Examples wherein various cyclic ketone peroxides are stabilized in combination with certain phlegmatizers/diluents such as pentadecane, Primol 352, isododecane, or Solvesso 100, which read on applicant's claimed co-crystallizing compounds, see columns 11-23.

Stigter et al. teach a process for the preparation of (co)polymers employing a peroxide composition comprising at least one organic peroxide wherein at least 20% of the total active oxygen content of said organic peroxide is attributable to one or more cyclic ketone peroxides represented by the following formulas I-III: ##STR1## These cyclic ketone peroxides are highly efficient as polymerization initiators. Also new cyclic ketone peroxides and compositions comprising such compounds are provided, see

abstract. Applicant's claims are deemed to be anticipated over those Examples wherein various cyclic ketone peroxides are stabilized in combination with certain phlegmatizers/diluents such as isododecane, Solvesso 100, Exx 700 and dibutylphthalate which read on applicant's claimed co-crystallizing compounds, see columns 7-17.

In the alternative, Torenbeek et al., Schuurman et al., Meijer et al., and Stigter et al., may differ from applicant's claimed invention because it is a little unclear if the specific species of phlegmatizers/diluents used in combination with the cyclic ketone peroxides, as set forth in each reference's Examples, actually reads on applicant's claimed co-crystallizing compounds. It would have been obvious to one having ordinary skill in the art to use the individual disclosures of each reference as strong motivation to actually use species of phlegmatizers/diluents that actually read on applicant's claimed co-crystallizing compounds, since such species are either directly disclosed such as triethyl phosphate, tricresyl phosphate, trixylyl phosphate, cresyl diphenyl phosphate, or they fall within the broad disclosure of phlegmatizers/diluents as disclosed by each reference. Furthermore, the Examples in each reference were given by way of illustration and not by way of limitation.

11. Claims 1-7 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schuurman et al. U.S. Patent Number 6,358,435.

Schuurman et al teach a composition comprising cyclic ketone peroxide and a phlegmatizer having a 95% boil-off point falling in the range of 220-265.degree. C., most preferably 235-250.degree. C. A preferred peroxide is cyclic methyl ethyl ketone peroxide. Preferably, a single phlegmatizer is used. Preferred phlegmatizers are Isopar.RTM. M and Soltrol.RTM. 170. The invention also pertains to the use of compositions according to this invention in (co)polymerization and polymer modification processes, see abstract. Applicant's claims are deemed to be anticipated over those Examples wherein cyclic methyl ethyl ketone peroxide is stabilized with certain phlegmatizers/diluents, such as isododecane, Soltrol 170, Isopar M and Marcol 52, which read on applicant's claimed co-crystallizing compounds.

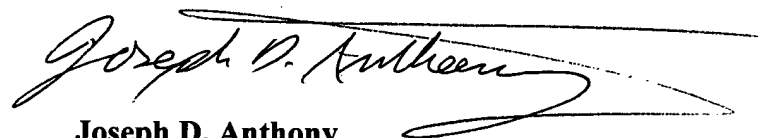
In the alternative, Schuurman et al. may differ from applicant's claimed invention because it is a little unclear if the specific species of phlegmatizers/diluents used in combination with the cyclic methyl ethyl ketone peroxide, as set forth in the Examples, actually reads on applicant's claimed co-crystallizing compounds. It would have been obvious to one having ordinary skill in the art to use disclosure of the reference as strong motivation to actually use species of phlegmatizers/diluents that actually read on applicant's claimed co-crystallizing compounds, since such species are either directly disclosed or they fall within the broad disclosure of phlegmatizers/diluents as disclosed by the reference. Furthermore, the Examples in the reference were given by way of illustration and not by way of limitation.

Prior-Art Cited But Not Applied

12. Any prior-art reference which is cited on FORM PTO-892 but not applied, is cited only to show the general state of the prior-art at the time of applicant's invention. Please note that cited U.S. Patent Number 5,808,110 is the U.S. equivalent of the applied Torenbeek et al. WO 96/03397 reference.

Examiner Information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (571) 272-1117. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (571) 272-1119. The centralized FAX machine number is (571) 273-8300. All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner.



Joseph D. Anthony
Primary Patent Examiner
Art Unit 1714

6/25/06